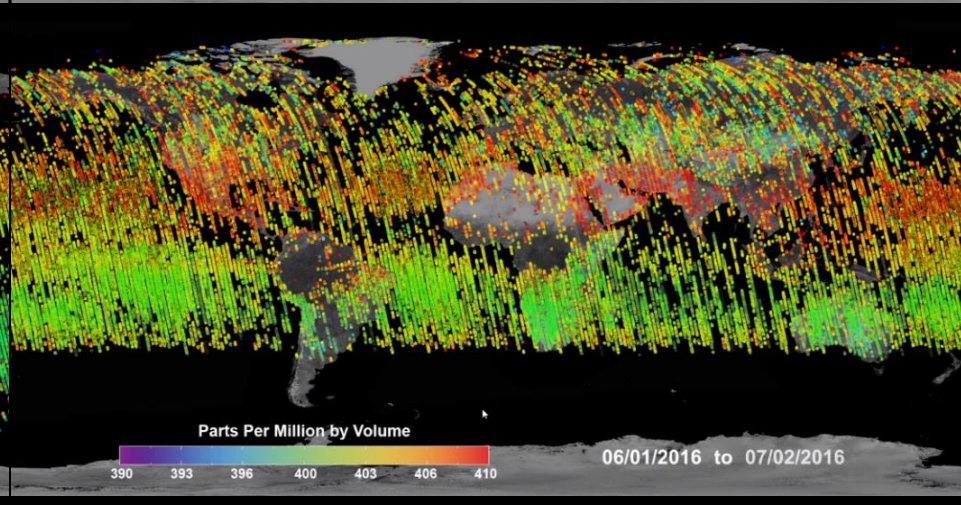
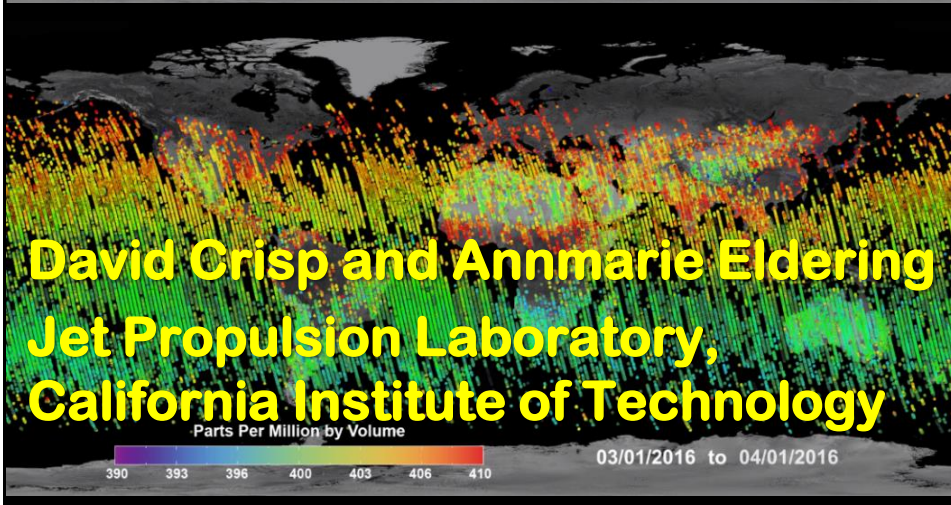
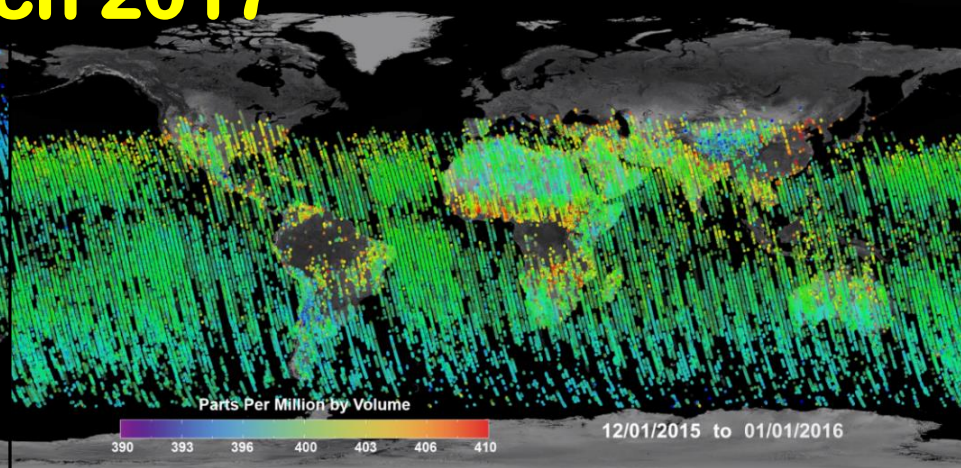
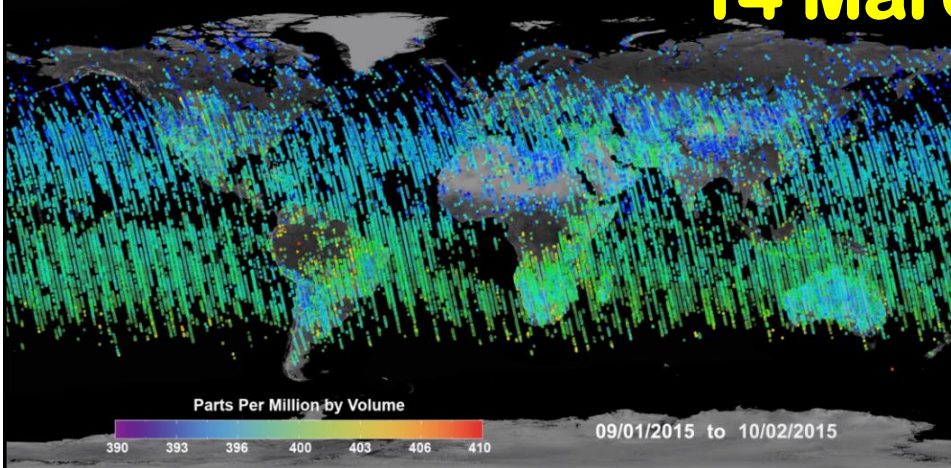




# OCO-2 Status 14 March 2017



**David Crisp and Annmarie Eldering**  
**Jet Propulsion Laboratory,**  
**California Institute of Technology**



# OCO-2 Status

- **Observatory Status: Nominal**
  - Last drag make-up maneuver (DMUM#14) - 13 January 2017
    - Inclination Adjust Maneuver (IAM) sequence in progress
    - Next scheduled Drag Make-Up Maneuver – 27 March 2017
- **Instrument Status: Nominal**
  - Recovery from February 21 – March 1, 2017 Decon Complete
  - “Return to Science” on orbit 14147
- **Science and Validation**
  - Version 7r delivered through February 22, 2017.
  - ACOS B7.3 posted on GES DISC with updated User Guide
    - ACOS\_L2S: ACOS GOSAT/TANSO-FTS Level 2 Full Physics Standard Product V7.3





# Snow Day for the East Coast, Complements of Winter Storm Stella





# The OCO-2 Senior Review Proposal

- The OCO-2 Senior Review Proposal was successfully submitted to NASA HQ on March 3, 2017
- The Science Story summarizes
  - Impacts of the 2015 El Niño on the Carbon Cycle
  - Fire Emissions from Indonesia
  - Sources/ Anthropogenic Enhancements
  - Interdisciplinary Science Enabled by OCO-2 and the A-Train
  - Algorithm Development and Validation Efforts
- The Technical Story focused on
  - Spacecraft bus status
  - Instrument status
- A baseline (in-guide) and “optimal” budget were proposed



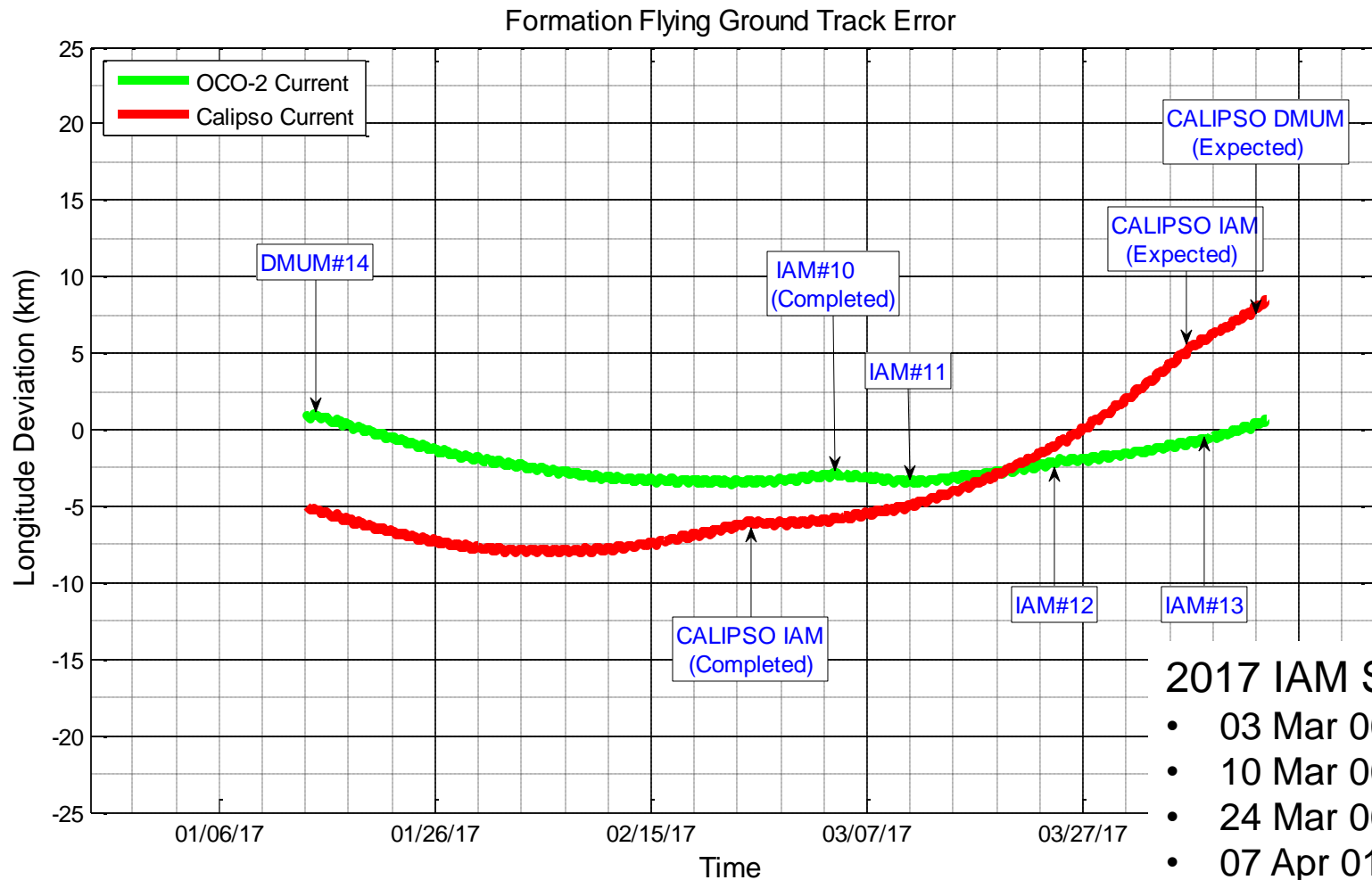


# Mark Garcia Appointed Project Manager

- **Mark Garcia's appointment as the OCO-2 Project Manager was officially announced on March 10, 2017**
- **Mark's appointment was effective starting on February 6, but he has been serving in this capacity for a few months, along side P.J. Guske, who has been transitioning to an new project (Asteroid Redirect Mission)**
- **Mark has been a long-time member of the Mission Operations team as a navigator**
- **Mark also was the primary author of the Technical and Budget section (Section 2) of the OCO-2 Senior Review proposal, which was successfully submitted on March 3, 2017**



# OCO-2 and CALIPSO Ground Tracks

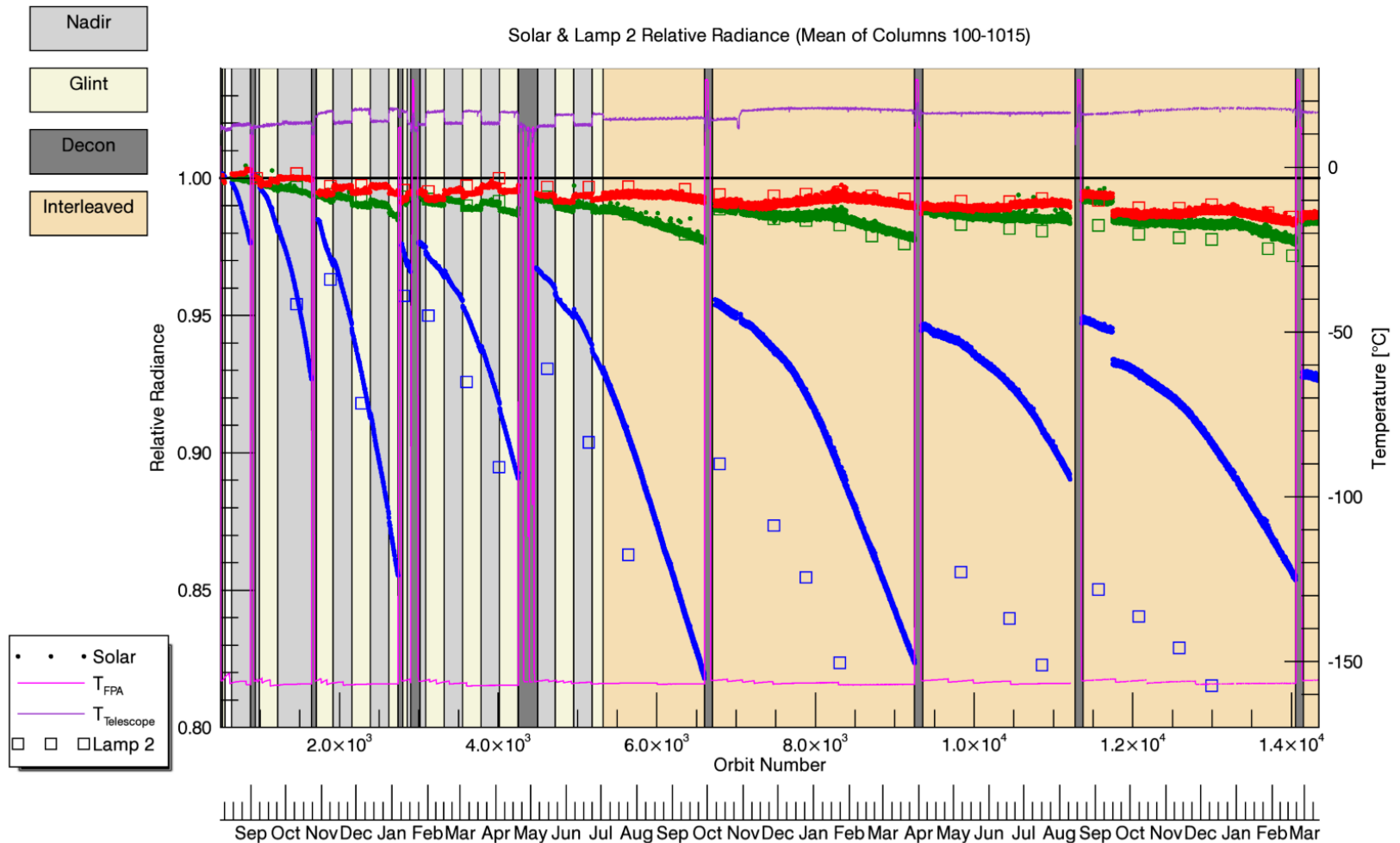


The alignment of OCO-2 and CALIPSO will degrade as the 2017 IAM series progresses





# OCO-2 Instrument Trending

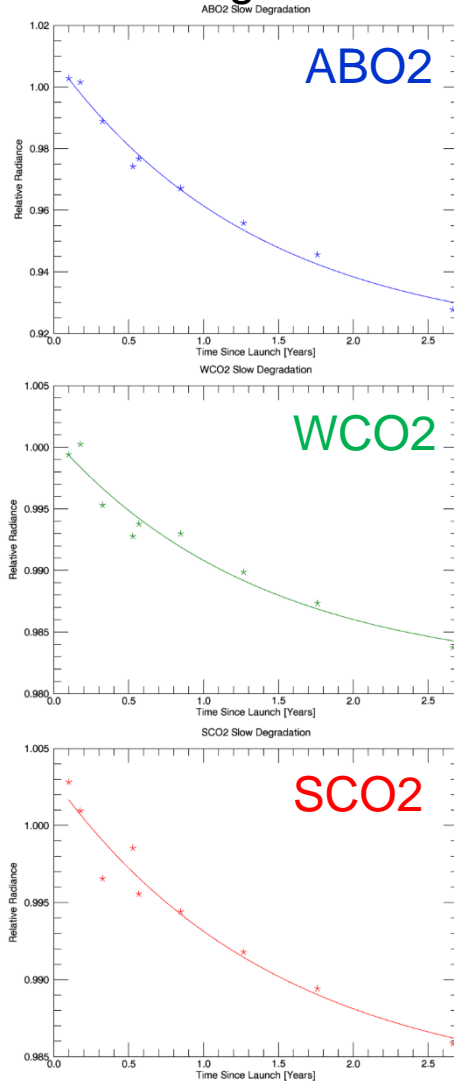


**ABO2 Throughput restored from 85.5% (91.9%) to 92.7% (99.7%)**  
**(values in parenthesis are corrected for slow degradation @ 93%)**



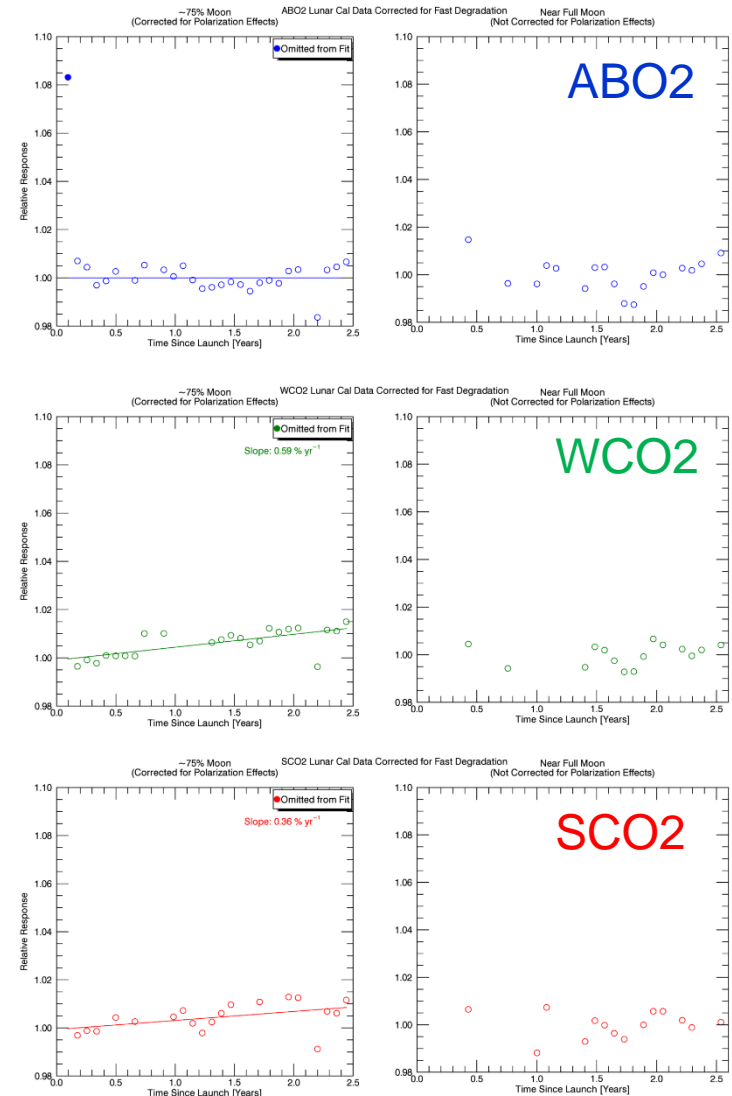
# Trends in Slow Degradation

## Slow Degradation



The slow degradation of the solar diffuser is continuing, but the rate of degradation is decreasing with time in all 3 channels (Left)

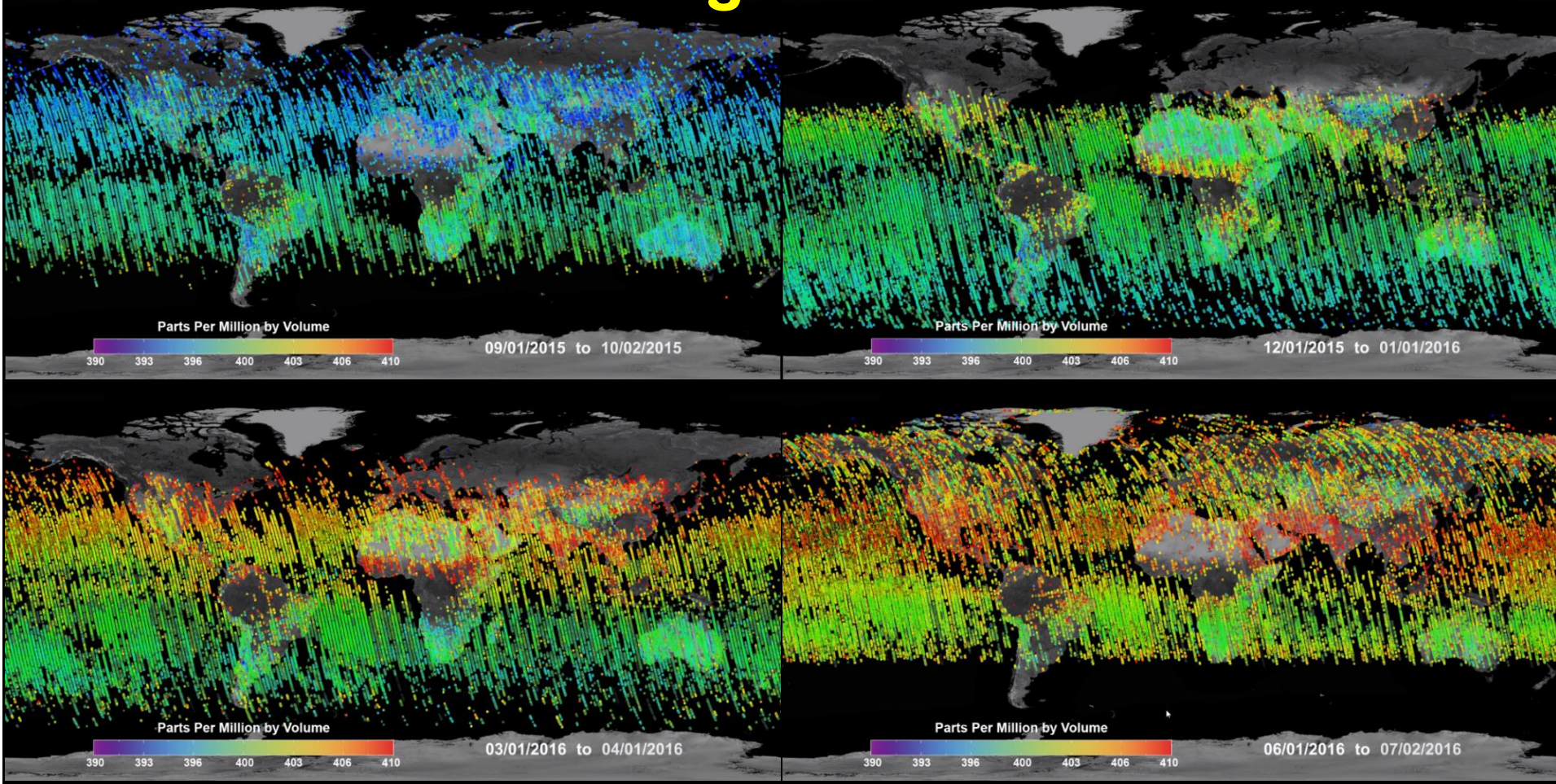
Trends in the ABO2 optics degradation inferred from earlier observations have vanished (right). The WCO2 and SCO2 throughput appears to be increasing slowly with time.







# Plans for the March 21-23 Science Team Meeting at Caltech





# OCO-2 Science Team Meeting

- **Monday 20 March: Breakout Sessions**
  - Morning: v8 prep breakout – Buwalda Room, North Mudd
  - Afternoon: Flux Inversion – Buwalda Room, North Mudd
- **Tuesday – Thursday 21-23 March Science Team Meeting**
  - Plenary Sessions and Speed Talks will be held at the Baxter Auditorium. Posters will be set up outside
  - Dinner Wednesday Night
- **Friday 24 March: Tag-on Meetings (GeoCarb)**
- **The Web Site is live!**  
<https://sites.google.com/view/oco2stm0317/home>
  - Register and sign up for speed talks and Wednesday dinner ASAP
- **A WebEx connection is being prepared**
  - Please register if you plan to join us by WebEx - announcements of schedule changes will be made via the registration email list



# Critical Items

- Day and order of the speed talks are listed on following pages
  - The numbers below 30 on Tuesday 21 March
  - Talk numbers > 30 are on Wednesday 22 March
- Email Annmarie ([Annmarie.Eldering@jpl.nasa.gov](mailto:Annmarie.Eldering@jpl.nasa.gov)) a **2 page PDF** by 5 PM the day before your talk. Use the subject **SPEEDTALK**
- Please use this naming convention:  
**[\[number\]\\_\[lastname\]\\_speedtalk.pdf](#)**
- Annmarie will aggregate these so we have one large PDF that we can step through for the speed talks.
- The poster boards will be 4 feet high and 8 feet wide. Don't feel obliged to use all the space but you can make a good size poster.
  - We have not heard from any algorithm folks who want to make a poster - please let me know if you'd like to bring one.
- Current weather report suggests there may be rain on Tuesday – so please take a look at the weather before you pack your bag.





# Tuesday, March 21

Topic	Discussion Leader	Start Time	duration (min)	
Registration and check in		8:15 AM	30	
Welcome from HQ	Ken Jucks	8:45 AM	10	
Welcome from OCO-2	Annmarie Eldering	8:55 AM	10	
Welcome, Overview, Logistics and Introductions	Dave Crisp	9:05 AM	10	
Mission Status	Mark Garcia	9:15 AM	15	
SPEED TALKS (related to flux and local)	ALL	9:30 AM	45	
coffee	ALL	10:15 AM	30	
reconvene		10:45 AM	0	
flux team breakout report	Baker	10:45 AM	20	
science report - flux group 1	team 1	11:05 AM	15	baker
science report - flux group 2	team 2	11:20 AM	15	sean
science report - flux group 3	team 3	11:35 AM	15	Junjie
LUNCH	ALL	11:50 AM	75	
science report - flux group 4	team 4	1:05 PM	15	Schuh
science report - flux group 5	team 5	1:20 PM	15	Jacobson
science report - flux group 6	team 6	1:35 PM	15	sourish
science report - flux group 7	team 7	1:50 PM	15	feng
science report - local group 1	Eric K et al	2:05 PM	20	
science report - local group 2	Lauvaux et al	2:25 PM	20	
POSTERS	ALL	2:45 PM	60	
coffee	ALL	3:45 PM	15	
OCO-3 and local measurements	Pavlick/ Eldering	4:00 PM	20	
UQ overview	Braverman	4:20 PM	10	
UQ update	Hobbs + Connor	4:30 PM	30	
End of Day	ALL	5:00 PM	0	





# Wednesday, March 22

Topic	Discussion Leader	Start Time	duration (min)
Registration and check in		8:00 AM	30
Welcome, Overview and Logistics	Dave Crisp	8:30 AM	10
speed talks (related to alg, clouds, uq, sif)	ALL	8:40 AM	45
v8 characteristics (incl calibration)	O'Dell + Eldering	9:25 AM	40
coffee	ALL	10:05 AM	30
data quality discussion (WL, lessons learned, v8 prep)	Eldering/O'Dell	10:35 AM	30
clouds overview	Merrelli	11:05 AM	40
LUNCH	ALL	11:45 AM	75
validation overview (v7 update)	Osterman + Wunch	1:00 PM	20
various val topics	Osterman +	1:20 PM	40
sif overview	Frankenberg	2:00 PM	30
sif contribution	other	2:30 PM	30
POSTERS	ALL	3:00 PM	60
COFFEE	all	4:00 PM	15
OCO-3 mission status	Eldering	4:15 PM	20
wrap up/ prep for tomorrow's discussion	Eldering + ALL	4:35 PM	25
End of Day	ALL	5:00 PM	
		5:00 PM	
Dinner for those who signed up - bring cash \$20 + drinks		6:00pm	



# Thursday, March 23

Topic	Discussion Leader	Start Time	duration (min)
Registration and check in		8:30 AM	30
Science analysis/Flux recap = where are we as a mission	Schimmel et al	9:00 AM	20
Looking forward - key science questions (panel disc)	theme leads	9:20 AM	60
Discussion	all	10:20 AM	20
COFFEE	ALL	10:40 AM	30
part 2 of looking forward --> paper plans	ALL	11:10 AM	45
review of action items	Eldering et al	11:55 AM	20
End of Meeting		12:15 PM	0

## WEBEX Connection:

Meeting number: for Tues Wed and Thurs 907 457 944

## Meeting link:

<https://jpl.webex.com/jpl/j.php?MTID=mcc41539c3e5dfc1be8e1f12106b3bd77>

## Audio connection:

+1-510-210-8882 USA Toll



# Speed Talks: Tuesday March 21

talk #	first name	last name	affiliation	email address
1	Sourish	Basu	NOAA ESRL	sourish.basu@noaa.gov
2	Sean	Crowell	University of Oklahoma	scrowell@ou.edu
3	Liang	Feng	University of Edinburgh	lfeng@staffmail.ed.ac.uk
4	Lesley	Ott	NASA GSFC	lesley.ott@nasa.gov
5	Junjie	Liu	Jet Propulsion Lab	junjie.liu@jpl.nasa.gov
6	David	Baker	CIRA/Colorado State	dfbaker66@gmail.com
7	Brad	Weir	NASA GSFC	brad.weir@nasa.gov
8	Jacob	Hedelius	California Institute of Technology	jhedeliu@caltech.edu
9	Hank	Margolis	NASA Headquarters	Hank.A.Margolis@nasa.gov
10	Gretchen	Keppel-Aleks	University of Michigan	gkeppela@umich.edu
11	Emily	Bell	Colorado State University	embell@colostate.edu
13	Annmarie	Eldering	<a href="#">JPL/Caltech</a>	<a href="mailto:eldering@jpl.nasa.gov">eldering@jpl.nasa.gov</a>
14	Denis	Joulet	CNES	
30	Dave	Winker	NASA Langley Res Ctr	david.m.winker@nasa.gov



# Speed Talks: Wednesday March 22

31	Susan	Kulawik	BAERI/NASA Ames	Susan.S.Kulawik@nasa.gov
32	Lianghai	Wu	SRON, Netherlands Institute for Space Research	l.wu@sron.nl
33	Aronne	Merrelli	Space Science and Engineering Center, Univ. of Wisconsin-Madison	aronne.merrelli@ssec.wisc.edu
34	Anthony	Davis	JPL / Caltech	Anthony.B.Davis@jpl.nasa.gov
35	Mark	Richardson	JPL/Caltech	markr@jpl.nasa.gov
36	Tommy	Taylor	CSU	tommy.taylor@colostate.edu
37	Anthony	Bratt	University of Maryland, Baltimore County (UMBC)	brattan1@umbc.edu
38	Rob	Nelson	Colorado State University	rrnelson@atmos.colostate.edu
39	Amy	Braverman	JPL	Amy.Braverman@jpl.nasa.gov
40	Jon	Hobbs	JPL	jonathan.m.hobbs@jpl.nasa.gov
41	Brian	Connor	BC Scientific Consulting	bc.scientific.consulting@gmail.com
42	Greg	Osterman	JPL	gregory.osterman@jpl.nasa.gov
43	Vivienne	Payne	JPL/Caltech	vivienne.h.payne@jpl.nasa.gov
44	Zhao-Cheng	Zeng	Caltech	zcz@gps.caltech.edu





# Upcoming Activities

- 21-23 March: OCO-2 Science Team Meeting, Caltech, Pasadena, CA
- 27-30 March: North American Carbon Program, Bethesda, MD
- 19-21 April: A-Train Symposium, Pasadena, CA
- 23-28 April: EGU, Vienna
- 20-25 May: JpGU, Chiba, Japan
- 6-8 June: IWGGMS, Helsinki – **Abstracts due March 20**
- 28-30 June: CEOS VC-AC, CNES HQ, Paris
- 6-11 August, AOGS, Singapore
- 21-25 August, ICDC10, Interlaken, Switzerland